

## ABSTRACT

Multi-stage intensifiers for injectors of pressurized fluid (e.g., fuel) allowing selection of intensified injection fluid pressure and thus fluid injection flow rate by selectively applying actuating fluid supply pressure to one or more of the multi-stage intensifiers. In a disclosed embodiment, two coaxial unequal sized intensifier pistons are used, with a control valve controlling selective pressurization of either the relatively smaller intensifier piston, or pressurization of both the relatively smaller intensifier piston and the relatively larger intensifier piston to control the intensified injection fluid pressure and flow rate of injection. Other embodiments, including ones using multi-stage intensifiers mechanically coupled together, controlled by different types of control valves and having more than two stages are also disclosed.